

**GOVERNMENT OF INDIA
COMMUNICATIONS
LOK SABHA**

UNSTARRED QUESTION NO:759
ANSWERED ON:26.02.2001
OPTICAL FIBRE CABLES
UMMAREDDY VENKATESWARLU

Will the Minister of COMMUNICATIONS be pleased to state:

- (a) whether the Government propose to lay Optical Fibre Cables (OFC) for about one lakh kilometre route during 2000-2001 ;
- (b) if so, the details including the estimated cost thereof;
- (c) the steps taken by the Government in this regard ;
- (d) whether the Optical Fibre cable is cheaper than the microwave system for extending telecom facilities ; and
- (e) if so, the details of the comparative advantage of Optical Fibre Cables system over the microwave system ?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF COMMUNICATIONS (SHRI TAPAN SIKDAR)

- (a) Yes Sir, subject to availability of material.
- (b) Estimated cost Rs. 1990 Crs.
- (c) Procurement of 6F OFC, is under process by different Circles. For procurement of 12F and 24F OFC, a tender was floated but supply could not commence for full quantity due to non-acceptance of tendered prices by vendors. A short notice limited tender has been called for procurement of balance quantities.
- (d) Reliable communication media can be provided by OFC M/w and satellite depending upon geographical terrain in an area. Techno-economical consideration is kept in view while planning any reliable communication media for a place.
- (e) Details of comparative advantage of OFC system over the microwave system is given in Annexure.

ANNEXURE

Different media are suited for different communication jobs. The choice depends on the job and nature of the transmission medium.

Radio frequency/Microwave communication is the best way to avoid cables for cellular phones and to reach remote places like tropical islands or arctic bases.

On the other hand, OFC system is preferable for making physical links among many fixed points. Key factors to consider are how far the signal must go and how much information it carries.

Advantage of OFC over microwave media is detailed as below:

OFC MICROWAVE

- 1. High bandwidth (information carrying capacity). Limited bandwidth
- 2. Longer distance between Regenerators/amplifiers. Maximum 50 Km.
- 3. Upgradability of the system without fibre redeployment. Upgradability of system needs all changes and hence heavy cost involved.
- 4. Immune to electromagnetic Interference(EMI). Susceptible to EMI.
- 5. Reduced installation and maintenance cost . Repaid installation High maintenance cost.
- 6. Less susceptible to weather /disasters but can be washed away in flood, cyclone etc. Comparatively it is stable.

7 System available

8 Mb/s, 34 Mb/s,
140 Mb/s, STM-1, STM-4
STM-16 & DWDM systems. System available
2Mb, 8 Mb(2 Ghz), 34Mb
(7 Ghz, 11 Ghz), 140 Mb
(6Ghz, 13 Ghz, 18 Ghz)

8. It is not possible to take it to each and every geographical location . It may be possible to connect in rugged terrain also.